

Amphibia, Anura, Ranidae, *Lithobates palmipes* (Spix, 1824): New record and geographic distribution map in South America

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ABSTRACT: Herein we report a new record for *Lithobates palmipes* (Spix, 1824) for the state of Tocantins, Brazil.

Currently, 342 species of ranid frogs (family Ranidae) are recognized in 16 genera. The genus *Lithobates* currently encompasses 49 species, with two occurring in Brazil, *Lithobates castebeianus* (Shaw, 1802), an introduced species for commercial use, and *Lithobates palmipes* (Spix, 1824) (Sbh 2010). The latter species is distributed in Northern and Amazonian South America east of the Andes, including Colombia, Ecuador, Peru, Bolivia, Venezuela, and the Guianas (Frost 2011). In Brazil it has been reported from the states of Acre, Alagoas, Amazonas, Bahia, Goiás, Mato Grosso, Pará, Paraíba, Pernambuco, Piauí, Rio Grande do Norte, Sergipe, (Hillis and Sá 1988; Barros 2005; Canedo and Bilate 2005; Sousa 2009; Oliveira et al. 2010; Ferreira 2011; Ramalho et al. 2011).

Lithobates palmipes is a nocturnal tropical rainforest species, occurring terrestrially near permanent waterbodies, including slow-flowing watercourses, rivers, lakes and ponds. They also occur in flooded forest, and their eggs are deposited directly in the water at the beginning of the dry season. The tadpoles develop fully in water (La Marca 2001).



FIGURE 1. Voucher specimen of *Lithobates palmipes* ZUFG-5929, SVL 67.8 mm, from Rio Sono municipality, state of Tocantins.

On 26 September 2011 at 19:20 h an adult *Lithobates palmipes*, SVL 67.8 mm (Figure 1) was captured on a bank of the Perdida River (09°20'22"S, 47°52'17"W, elevation 196 m), in Rio Sono municipality, state of Tocantins, Brazil. The specimen was euthanized with 5% lidocaine gel, fixed in 10% formalin and preserved in 70% alcohol; tissue samples were taken. The specimen was collected under permit SICAM 3834/2011, and is deposited at the Coleção Zoológica da Universidade Federal de Goiás (ZUFG), Goiânia, Goiás, Brasil, number ZUFG-5929.

This is the first record of *Lithobates palmipes* in Tocantins state (Figure 2), extending the species distribution 875 km north from the municipality of Piranhas, state of Goiás (Oliveira et al. 2010), 1194 km west from Murici, state of Sergipe (Ferreira and Faria 2011), and 356 km southwest from Ribeiro Gonçalves municipality, state of Piauí (Ramalho et al. 2011).

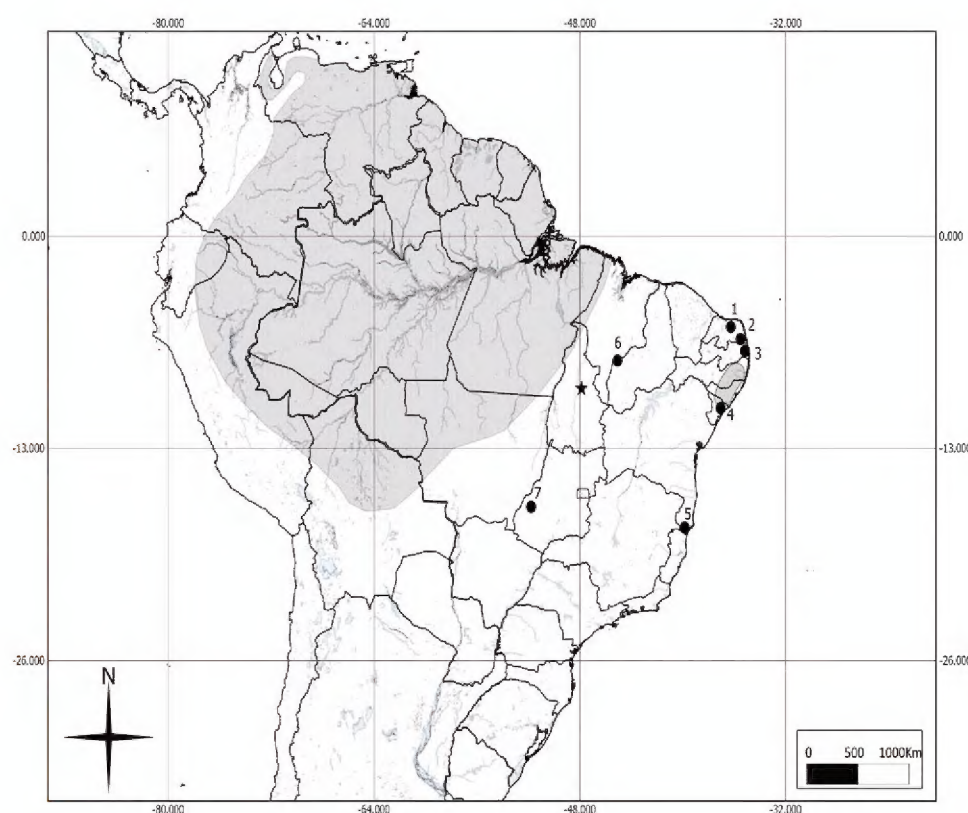


FIGURE 2. Geographic distribution of *Lithobates palmipes* (shaded area, IUCN, 2010) and localities where the species has been reported: 1: Natal-Rio Grande do Norte; 2: Ceará-Mirim- Rio Grande do Norte; 3: Rio Tinto-Paraíba; 4: Murici- Sergipe; 5: Caravelas- Bahia; 6: Ribeiro Gonçalves- Piauí; 7: Piranhas- Goiás. The star represents the new record in Tocantins.

The new location is also an important record in the transitional area between the Cerrado and Amazon Biomes. Peculiarities of the Cerrado and Caatinga show past connections between the Amazon and Atlantic Forest (Costa 2003). It is believed that in the Pleistocene, the Amazon and Atlantic Forests were connected by corridors of gallery forests and Seasonally Dry Tropical Forests (Oliveira-Filho and Ratter 1995). Thus it is possible that the distribution of *Lithobates palmipes* is related to the presence of enclaves of gallery forest in the Cerrado and “brejos de altitudes” in Caatinga that may have maintained populations of *Lithobates palmipes*. The record in Tocantins fills a gap in the distribution between Goiás and northeastern Brazil, facilitating a better understanding of the occurrence of the species, an important step for the knowledge of the distribution of this species and its conservation.

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